

Application Number 10/569,825
Response to Office Action of 05/12/2010

This listing of claims will replace all prior versions and listings of claims in the application:

1-3. (canceled)

4. (currently amended) Apparatus for use in a reduced clock rate finite impulse response filter comprising:

- i) Q latch means all coupled to an input data signal having a unit interval rate and each latch means providing a latched output signal in response to a latch control signal;
- ii) Q multiplexer/multiplier, (mux/mul), means, each mux/mul means providing one output and Q inputs to receive the latched output signal of a respective latch means;
- iii) selection means for controlling said mux/mul means operative to produce an output signal selected from one of said Q inputs;
- iv) means to produce a clock signal; and
- v) Q phase delay means coupled to said clock signal providing an output latch control signal to a corresponding latch means;

wherein each phase delay means is adapted to produce a unique output latch control signal that is phase delayed from the clock signal by a phase delay of $N \times 360/Q$, where unique values of N correspond to each individual phase delay means and range from 0 to $Q-1$, wherein Q is an integer greater than 1.

5. (previously presented) The apparatus of claim 4 further including:

- i) signal conditioning means for each mux/mul means to condition the output signal of the mux/mul means; and
- ii) summing means to sum the conditioned signals of all such signal conditioning means.

6. (previously presented) The apparatus of claim 5, wherein said signal conditioning means is adapted to modify the gain and the sign of the output signal of the corresponding mux/mul means.

7. (canceled)

8. (canceled)

9. (previously presented) The apparatus of claim 4, wherein the means to produce a clock signal is

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adapted to operate to produce a clock signal that is a sub-multiple Q of the unit interval rate of said input data signal.

10. (previously presented) The apparatus of claim 4, wherein the selection means is adapted to operate to select an output signal from one of said Q inputs at a rate corresponding to the unit interval rate of said input data signal.

11. (canceled)

12. (canceled)

13. (canceled)